

Volume 62

November 1996

Issue 619

An ARNS Award Winning Newsletter Published Ten Times A Year



CLUB REPEATERS

VE3TBR

Phone: 807-767-7661
Listen: 146.820 MHz
Txmit: 146.220 MHz
Listen: 444.825 MHz
Txmit: 449.825 MHz

VE3YQT

Phone: 807-767-5492
Listen: 147.060 MHz
Txmit: 146.460 MHz

VA3OLA

Listen: 53.050 MHz
Txmit: 52.050 MHz

VE3BGA

Listen: 145.450 MHz
Txmit: 144.850 MHz

WEEKLY BREAKFASTS

Saturdays 10:00 a.m.
Blue Parrot Restaurant

2 METRE NET

Mondays 7:00 p.m.
VE3YQT Repeater.

NEXT MEETING



7:30 p.m. Room 207B
McIntyre Building
Confederation College

SHORTWAVES

The LARC home page has moved and is now located at: www.tbaytel.net/lbougie/larc.htm Len, VA3LEB, has put links from the old page address to the new one.

HI-Q, thanks to Len, has found a world-wide audience on the Internet. I've received several requests for information and permission to republish articles from past issues. Several club members, Rob, VE3FLB; Gary, VA2CK; and Wayne, VA3LOG, to name a few, have had their articles picked up by TCA (The Canadian Amateur), the ARNS (Amateur Radio News Service) and other radio clubs.

Manuel, VE3MPT bagged a bull moose and is busy stuffing his freezer. Moose burgers and steaks next summer at Manuel's QTH, eh? I'm still wondering how Manuel got the moose to get into the bag!

For those with Internet access, I would strongly recommend that you periodically stop by the FCC, ARRL, Industry Canada and RAC home pages to keep up with the current and future changes to the Amateur Radio Service. Radio Amateurs of Canada is relocating to Ottawa to be closer to the powers-to-be. You can't lobby effectively unless you are in the politicians' backyard.

There are a lot of new members out there. This editor would really appreciate it, if those new club members, or anyone else, would write short bios (300 words or less) about themselves and what they hope to do or are doing in, or with, amateur radio.

Governments own the RF airspace and with barely 18 to 25 percent of licenced amateurs

belonging to RAC or the ARRL, politicians will laugh if they (RAC) claim to represent all Canadian amateurs. How can RAC effectively lobby and get the Feds to protect the Amateur Radio Service, when more than 3/4 of licenced amateurs aren't members? We pay the lowest fees in the world for the privilege (not right) of using the RF spectrum. Skip a donut and coffee or two and join RAC.

The Scouts Jamboree On The Air (JOTA) was held on the weekend of October 19th and 20th. Bob, VE3RVA; Bob, VA3ROM and Ken Rusnick had small groups of scouts at their homes. On Saturday, the bands weren't too good, so I arranged a few local QSOs. Many thanks to Archie, VE3HWA, Wayne, VA3WRL and Pat, VA3GD for talking to the lads.—Ed.

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Founding President
P.J. (Pat) O'Shea, VE3FW
1881-1972

In honour of the memory of our founding president, Mr. P.J. (Pat) O'Shea, the club call sign is VE3FW.

Senate

Bill Roberts, VE3ARN
Keith Fiske, VE3JQ
Bert Lambert, VE3BKY
Ray Greer, VE3CH
Hugh Elliott, VE3EDW
Bill Klemacki, VE3AJ

Executive Board

President: Ian Mellis, VA3RIM	577-1628
Vice Pres: Ed Baumann, VE3SNW	622-1216
Secretary: Norm Bell, VE3XRC	577-9316
Treasurer: John Watson, VE3GTX	683-3199
Directors: Judy LeFevre, VA3EAP	622-7920
Dave Horne, VA3DVE	344-9325
Don Bel, VA3DPB	473-5482
Rob Van Wyck, VE3FLB	344-7845
Mem.Sec: John Watson, VE3GTX	683-3199
PastPres: Terry Stewardson, VE3TKA	577-9439
HI-Q Ed: Robert Mazur, VA3ROM	344-7731

Thunder Bay Voyageur Award

The Lakehead Amateur Radio Club in cooperation with the City of Thunder Bay, sponsors the Voyageur Award. Any SWL, scanner listener or ham monitoring or working 5 Thunder Bay amateur radio stations qualifies. Send your log copy with dates, times, frequencies, callsigns and \$2.00 to the Awards Manager at the club address below.

Club and Newsletter Information

HI-Q is published by the Lakehead Amateur Radio Club, Inc., an Ontario registered non-profit corporation. The opinions expressed or implied in issues of *HI-Q* are those of the author. The LARC assumes no responsibility for the accuracy or the information submitted.

Material in *HI-Q* may be copied for non-profit use provided that credit is given to the source. Contributions related to amateur radio, especially those articles of interest to Northwestern Ontario amateurs are encouraged. Material can be submitted in WordPerfect® format or as a text file via fax: 807-345-2688, packet: VA3ROM@VE3TKA, voice mail: VE3TBR repeater user 159 or via email: rmazur@thaytel.net. Send material or dated announcements no later than the 20th of the month in which it is to appear.

To reduce costs, advertising at the following per issued rates is accepted: full-page—\$60.00, 1/2 page—\$40.00, 1/4 page—\$20.00 and 1/8 page—\$15.00. Reduced rates (1/3 off) are available upon receipt of advance payment for 10 issues (one full year). Send your ad copy and cheque (payable to the LARC) to the club address listed below. Advertising in *HI-Q* does not imply an endorsement or recommendation of the product or service.

LARC membership fees are set for the year as follows: regular—\$30.00, associate—\$20.00, associate (attending ham classes)—\$90.00, student (attending school full-time)—\$15.00 and family—\$30.00 plus \$10.00 for each additional family member living at the same address. *HI-Q* is sent to all LARC members but only one copy is mailed to each address.

Mailing Address

The Lakehead Amateur Radio Club, Inc., Suite 184, 1100C Memorial Avenue, Thunder Bay, ON, P7B 4A3, Canada.

Internet Home Page

Get your copy of *HI-Q* electronically at: <http://www.thaytel.net/lbougie/larc.htm>.

RAC On The Move!

The RAC offices will be closed
from 7 October to 18 October 1996.

Beginning on Tuesday, 15 October 1996,
the RAC headquarters address in Ottawa will be:
Radio Amateurs of Canada
720 Belfast Road, Suite 217
Ottawa, Ontario
K1G 0Z5

Starting on Monday, 21 October 1996,
the new telephone numbers will be:
Phone (613) 244-4367
Fax (613) 244-4369

The new email address will be determined soon.

Summer Reunion

by Tim, VE3UQ

On Sunday, August 11th, 1996, a found one, a Tim Horton's was reunion was held in Smith Falls, pressed into service as a substitute. Ontario, attended by the following News flash! There was talk of former Thunder Bay residents and holding a "down east" annual get-members of TBARS:

Gary Spence, VA2CK (ex KA0PLO, VA3QC, VE3CK & VE3HJS); Coral Spence, VA2CS (ex VA2CX, VE3MUM & VE3PHR) and the Spence Clan (Russell, Lindsay & Stuart). Tim Pekkonen, VE3UO (ex VE3QAR & VE3HCM); Vic Loewen, VE3JAR and Dianne Loewen, VE3JAW.

The group enjoyed the fine sunny southern Ontario weather at the canal by the Rideau River watching the boats in the lift locks as they made their way along the canal system. Rag-chewing and eyeball system. Rag-chewing and eyeball QSO's were the order of the day. But, I have serious doubts about not being able to find a Robin's Donut

In true Thunder Bay "JAVA" tradition, the group descended upon the local Tim Horton's for a cuppa their finest brew. It should be noted that the town of Smith Falls was searched from end to end for a XYL

Gary's email address is cspence@synapse.net. He and his XYL are also new members of FISTS, Robin's Donut shop and having not the Morse code preservation society.

Meeting Minutes

by Norm, VE3XRC

Minutes of a meeting of the Lakehead Amateur Radio Club held in room 207B, Confederation College, Thunder Bay, Ontario on October 10, 1996.

The meeting was called to order at 7:30 p.m. by the President VA3RIM, Ian Mellis with 40 members and guests in attendance. The meeting started off with a brief round table of those in attendance introducing themselves.

Minutes of the previous meeting: The minutes of the previous meeting held September 12, 1996 were published in detail in the October edition of *HI-Q* and mailed to all members. **Motion:** moved by VE3AVS, Dave Kimpton and seconded by VE3ICY, Glen Wallace that the minutes be accepted as published. **Carried.**

Correspondence: Letter from Scouts Canada confirming our participation in CJ '97.

Thank you card from VE3DZR, Dwayne Randle for the framed newspaper article that was presented to him as a birthday present.

Treasurer's Report: VE3BBS, Skip Wright & VE3GTX, John Watson

Balance as of September 12, 1996:	
	\$1,268.77
Expenses:	1,271.48
Income:	614.82
Balance as of October 10, 1996:	\$ 612.11

The new treasurer, VE3GTX, John Watson pointed out that the above balance does not include the dues that were collected during the meeting. He also asked, that if possible, payments to the Club be made by cheque.

A question arose from the floor regarding membership cards. VE3BBS, Skip Wright explained what was involved in the production of membership cards and if anyone

was willing to take on this job, he would pass on the information. This item will be discussed at the next executive meeting.

Club Appointments: Licence Sponsor: VE3BBS, Skip Wright; **Public Relations:** VE3SNW, Ed Baumann; **Memberships:** VE3GTX, John Watson; **Theory Instructor:** VE3SNW, Ed Baumann; **Code Instructor:** VE3XRC, Norm Bell; **HI-Q Editor:** VA3ROM, Bob Mazur; **Awards Manager:** VE3XRC, Norm Bell; **Technical Hardware:** VE3BCD, Laurie Bridgett; VE3NHX, Lindo Scalese; VE3TKA, Terry Stewardson; **Technical Software:** VE3KRH, Steve Robb; VE3TKA, Terry Stewardson; **EMC Committee:** VE3JAB, Bob Bishop; VE3ZG, Mike Nawrocki; VE3XT, Bill Unger; VE3BCD, Laurie Bridgett; VE3NHX, Lindo Scalese; **Woman's Affairs:** VA3EAP, Judy LeFevre.

Equipment Update: The new duplexers have been installed in VE3YQT. Next Week (October 14 - 20) VE3TBR will be off the air for a few days so that the computer can be upgraded and cleaned up. Terry is still working on the Upsala repeater. A link from Upsala to Thunder Bay will have to be built.

Club Projects: The seminars will continue with the next one scheduled for November 21, 1996 at 7:00 p.m. on antenna theory. A beam will be examined to see how it is designed, etc. Terry still has the questionnaires that were filled out last year.

2M Net: VA3ROM, Bob Mazur is looking after the Monday night 2m net and has four net controllers and two alternates lined up.

Club Homepage: VA3LEB, Len Bougie is working on re-establishing the LARC Homepage.

JOTA: VE3FLB, Rob Van Wyck is

looking for volunteers willing to host a group of Cubs and Scouts for the annual Jamboree On The Air.

CJ '97: VE3FLB, Rob Van Wyck has been working on it. The Club has been officially invited to teach a program section at the jamboree. Rob will be looking for warm bodies early in 1997. We have also been invited to run a full blown amateur station at the jamboree site. Rob is looking for 3 or 4 intelligent, creative and good looking hams to help him out at this time.

Awards: VE3XRC, Norm Bell is looking for volunteers to form an awards committee. The objectives are to go over the existing awards and maybe come up with some new awards and criteria.

Women's Affairs: VA3EAP, Judy LeFevre will go through the call book and make a list of the females in the club. She will then attempt to contact each one for their ideas. Judy is also in charge of the Club's annual dinner in February and is assisted by VA3MOB, Maureen Bell. Judy is looking for more volunteers and ideas.

RAC: VA3GD, Pat Doherty recently spoke to about 40 amateurs in the Elliott Lake area. Radio Amateurs of Canada is moving along with taking over licensing from Industry Canada. This will probably happen in mid 1997. We have to increase participation in RAC, only 18% of Canadian Amateurs are members of the only national organization that is protecting our interests.

Emergency Coordinator: VE3BBS, Skip Wright stated that the emergency plan for this area is basically in place. Skip is willing to continue on as Emergency Coordinator, but if anyone else is interested, let Skip know.

(Continued on page 4)

Public Service Coordinator: the Club participates in approximately 14 public service events a year and VE3BBS, Skip Wright has retired as Public Service Coordinator. The executive will look at the position of Public Service Coordinator with individual members responsible for specific events. VE3ICY, Glen Wallace volunteered to look after the Sibley Ski Tour the first weekend of March 1997.

Classes: VE3SNW, Ed Baumann announced that the annual classes

would start Thursday, October 17, 1996.

Guest Speaker: VE3AVS, Dave Kimpton introduced the guest speaker for the evening, Mr. Ron Jason, an instructor at Confederation College. Ron started out his presentation by mentioning that the College would be pleased to have members of the Lakehead Amateur Radio Club who are technically inclined make presentations to the electronic classes. He then gave a brief overview of Programmable Logic

Controllers, what are they and what do they do. First introduced in 1975, these programmable logic controllers are now in widespread use in such industries as the paper mills. Confederation College has both day and night courses available and if anyone is interested, please contact Ron at 475-6160 or by email (r.Jason@confederationc.on.ca).

50/50 Draw: winner of the 50/50 draw was VE3INI.

Adjournment: moved by VA3GD, Pat Doherty that the meeting be adjourned. **Carried.**

RAC Report

by Pat, VA3GD, RAC Ontario North Directory

I was appointed the director for Ontario North on June 30, 1996 after Bob Bishop, VE3JAB decided to retire from the position. Elections were due shortly after with nominations to be in by September 1, 1996. Nomination papers were filed by one other amateur. The other person elected to withdraw his nomination, so I was elected by acclamation. My term of office is two years ending December 31, 1998.

Radio Amateurs of Canada is going through some significant changes. Industry Canada has approached RAC to take over the licensing and matters related to Canadian amateur licensing. A new company has been formed, to handle licensing, called "Amateur Radio Administration Services-Services Administratifs Radio Amateur" (ARAS-SARA).

Consultations between ARAS-SARA are on going with ARAS-SARA coming into operation by January 1, 1997. There will be a period of time needed for training and transferring of data from Industry Canada. It is anticipated the change over should be completed in July, 1997.

The October TCA (The Canadian Amateur magazine) has a RAC report to the IARU (International Amateur Radio Union) for WRC-99 on the future of amateur radio. One of the most significant recommendations is the elimination of CW as a licensing

requirement. (*As a required treaty obligation between nations. There is no speed requirement, just the ability to copy correctly Morse code signals! If Canada choose to, unilaterally, the Morse code speed requirement, for any class of ham ticket, could be set at 1 word per minute!*—Ed.) CW would remain as an operating mode. The majority of Canadian amateurs endorse this recommendation. National administrations around the world are reviewing the CW requirement. There are other excellent proposals in the report that make it required reading for all amateurs.

There are increasing pressures on the amateur radio spectrum. A recent attempt by commercial interests to grab the 2 metre and 70 centimetre band for LEO's (Low Earth Orbiting Satellites) was, we hope, diverted. Our frequencies are extremely valuable to the commercial interests. National organizations such as RAC, ARRL and others in various countries around the world are the ones protecting your interests. Without these organizations "amateur radio" would disappear, and commercial radio would reign. Are you one of those amateurs that keep saying I better join RAC and don't? You better start thinking about it, only through your support can RAC continue to

enhance and protect amateur radio. If you have any questions or suggestions please let me know.

I was in Sault Ste. Marie at a Hamfest, and spoke at a dinner in Elliot Lake on the October 5th weekend. I hope to meet with amateurs throughout Ontario North during my term of office.—73, Pat VA3GD.

Patrick G. Doherty, VA3GD
RR 1- 10035 John Street Road
Murillo, ON., P0T 2G0

Phone: 807 935 2253
Fax: 807 935 2134

email: pdoherty@tbaytel.net

Pat hopes to make this a regular, if not semi-regular column to advise LARC members of what's going on in RAC. Only in our region is the 2 metre band 144-148 MHz. Elsewhere, it's only 144-146 MHz. Guess what part of 2 metres the LEO group wants?

Only through your support of the Amateur Radio Service with your active membership in your local club and Radio Amateurs of Canada, can we be heard as a voice in Ottawa. Or, can you say CB. It's unregulated doesn't cost any money nor offer flexibility or room for growth.—Ed.

Telegraphic Codes of the World—Part 2

We continue the development of Morse code and other codes of the world. At present, every language in the world has Morse code characters including Esperanto!

A reminder that his article was written circa 1914. A lot has changed since then!—Ed.

The Bain Code

Edward Davy in England in 1839, and Alexander Bain of Scotland in 1846, employed the alphabet shown herewith:

A .—	J ...—	S —..
B .—	K .—..	T —...
C ...	L	U —.
D ..—	M .—..	V ———.
E ..	N ..—	W —....
F .—.—	O —	X —.—
G .—..	P .—.	Y ——
H .—.—	Q .—..	Z ———
I ..	R ——	
& ————		

In the years 1849 and 1850 Bain electro-chemical telegraph-lines were in operation between New York and Boston, New York and Washington, and New York and Buffalo.

The numerals used with the Bain alphabet were:

1 .—.—	6 ————
2 ..—	7 ———..
3 ...—	8 ——...
4—	9 —....
5	0 —.——

Austro-Germanic Code 1854

The alphabet and system of notating numerals and punctuation, as employed in European countries, is given herewith:

A .—	J .—.—	S ...
Ä—	K .—..	T —
B ...—	L .—..	U ..—
C .—.—	M .—..	Ü ..—
D ..—	N —.	V ...—
E ..	O ..—	W .—..
F ..—	Ö ..—	X —..—
G ...—	P .—..	Y ———

H	Q ——.—	Z ——..
I ..	R ——	
CH ————		
1 .—.—	6 —....	
2 ..—	7 ——..	
3 ...—	8 ——..	
4—	9 ——..	
5	0 ————	

.	Period
,	Comma	.—.—
:	Colon	————
'	Apostrophe	————
?	Question Mark	——..
!	Exclamation	—.—..
;	Semi-colon	—.—.
/	Fraction Mark	—————

Continental (International) Code 1851

The Austro-Germanic alphabet was first compiled at the telegraph conference held in Berlin, Germany, in 1851. This alphabet is still in use and is known variously as the Continental, International or Universal code. It is employed on European Morse lines, and is used almost universally in radiotelegraphic service as well as in submarine cable service throughout the world.

In addition to the symbols shown as constituting the Austro-Germanic code, the Continental alphabet of the present day changed some punctuation marks and added the following symbols:

.	Period	
,	Comma	—.—..	
/	Fraction Mark	—.—	
—	Hyphen	—....	
"	Quotes	—...—	
%	Percent	———...—	
(Parenthesis	—.—.—	
É		.. <td></td>	
Ñ		————	
Á		—.——	

The Continental alphabet as made up in 1851 was supposed to embody the best features of all then existing telegraph alphabets. As an indication

of how the various alphabets were picked over to form the international code it may be seen that the symbols for E, H, O, and P were taken from Steinhill's alphabet; the letter X and the numerals 1, 2, 3, 4, 5, 7, 8, 9 and 0 from the Bain alphabet (the last 5 numerals were arranged in reverse order from the original code).

The letters C, F, L, and R were taken from an obsolete pamphlet used in Germany and known as Gerke's while twelve of the remaining letters were taken from the American Morse alphabet of 1844.

Operators in submarine cable service used abbreviated symbols for the numerals of the continental code, as shown in the subjoined table:

1 .—	6 —....
2 ..—	7 ——..
3 ...—	8 —..
4—	9 —.
5	0 ———— or —

United States Navy Code

Until a few years ago (1914) when the Continental code was adopted in the radio service of the United States army and navy, the navy had a code of its own, as follows:

A ——	J ..—	S —..
B —..	K —..	T —
C .—.	L —..	U ..—
D ———	M ..—	V ———
E —.	N ..	W ..—.
F ——.	O —.	X ———
G .—..	P .—.	Y ...
H .—.—	Q .—..	
I ..	R —..	
Z ————		
1	6 —..	
2 ..—.	7 .—.—	
3 ...—	8 —..	
4—	9 .—..	
5	0 —..	

Japanese Telegraph Code

The Morse symbols employed in

(Continued on page 6)

transmitting telegrams which are written in regulation Japanese characters are fifty in number, in addition to those used to represent figures and punctuation marks.

Approximately 3.6 Japanese letters are equal to one English word or 4.67 Morse characters. The 50 symbols making up the alphabet have been taken from the American Morse and Continental alphabets, to which additional combinations of dots and dashes have been added to represent the extra 24 letters of the Japanese alphabet.

During World War II, American telegraphic and linguistic experts cracked the Japanese obscure dialect CW. The Japanese, in supreme arrogance, never figured that Occidentals could decipher it! After 6 months of brutal U.S. losses in the Pacific, 3 American aircraft carriers met and destroyed the vastly superior Japanese carrier task force in the Battle of Midway because we could read their Morse messages.—Ed.

Turkish Telegraph Code

In the Turkish Empire (1914) two telegraphic codes are in use. Once of

these, the Continental code previously shown, is employed in communication with foreign telegraph administrations, and when necessary in internal communications. The other alphabet used is known as the Turkish government private code, being used chiefly for official business.

Morse Forever!

Since the adoption of the Continental alphabet on European land lines in 1851 there has been almost continual, although unofficial, agitation in the United States, having for its object the substitution of the Continental alphabet in place of the Morse alphabet on American lines. On March 20, 1873, a vote was taken in the main operating room of the Western Union Telegraph Company, New York, to determine whether of not American telegraphers favored a change to the Continental alphabet. The result of the ballot indicated a pronounced sentiment in favor of retaining the Morse code.

On various occasions in the past fifty years the controversy has resulted in the production of a mass

of testimony and opinion for and against the adoption of the Continental alphabet as a universal code. Sifted down, the chief arguments favoring the retention of the Morse alphabet seem to be base on sentiment and upon the slightly superior speed possibilities of the Morse alphabet, while those advocating the adoption of the Continental code base their opinions upon the greater accuracy of transmission and upon the desirability of having but one alphabet in use on telegram lines, cables, and in radio service throughout the world.

A sending speed of 25 words per minute means 394.22 signals per minute in the case of the European alphabet, and 370.17 signals per minute in the case of the American Morse. Regardless of the fact that a considerable amount of the opinion favoring the change to the Continental alphabet comes from highly intelligent and progressive sources, nothing has so far been done to bring about the change. Indeed the deadlock is such at present (1914) that compromise alphabets are being proposed.—Donald McNicol.

LARC Public Service Events

by Mike, VE3ZG

It did not take long for our new **Service Events Co-ordinator** for seven. I know that there are more out President to start some arm-twisting, the Club. As I understand it, I am to there, and I will be digging them out. cajoling and threatening dire things be the contact person for all if more members of the Club did not get involved with the many events that we participate in over the course of a year.

With his business interests becoming more paramount in the scheme of things, Skip Wright, VE3BBS, has asked to be relieved of much of the responsibility of organizing all the Public Service Events that the Club has been involved with. Skip has done this for many years, and has done a fine job—he deserves a great round of applause for all the work he has done!

As a result, yours truly has been asked by our President, and surprisingly, I have agreed, to take on the task of being the **Public** a year's **HI-Q's**, I found reference to

the Club. As I understand it, I am to there, and I will be digging them out. On a monthly basis, I plan to insert organizations requesting the Club's assistance in providing all, or part of a communications system for all future events. I wish to make it clear that I do not wish, or intend to take over the operation of any event. There are all those people out there who have been on the front lines for many years, know the people involved, know the event and how it is run, and the operators that they can count on to run the event successfully. They will continue to do the same thing in the future.

I have begun to put together a list of the events that the Club has provided assistance for in a

We will also advertise these events on the 2m net each Monday on the VE3YQT repeater.—Ed.

O.P.P. CHRISTMAS PARADE

DATE: NOVEMBER 16TH

EVENT DIRECTOR:

NORM BELL, VE3XRC, 577-9316

OPERATORS NEEDED: 5

Contact Norm if you can participate. Remember, an extra body with a radio is always welcomed and you can be paired up with an experienced operator. You never know when Murphy may strike!

Ham Puzzler

by Dave, VE3AVS

Unscramble the four jumbled words. Then arrange the shaded letters to form a word or words associated with the call sign shown below. Answer in next month's *HI-Q*.

V E 3 X R C



S I O M N

R O T E W

B L E A C S

R T S O E O

Last month's answer:

VA3ROM = "EDITOR"
CORDS, MIXER, DIPOLE, TRIODE

Some scrambled words may, on occasion, be arranged in more than one way. Hint: Try amateur radio related words and topics.—Ed.

Morse 2000

In this world of ours, with the advent of satellite communications, computer overkill, etc., many have predicted the final death of Morse code. Contrary to the myths and propaganda, the facts are otherwise.

There are more companies and talented craftsmen, today, producing very fine and expensive handkeys and paddles. Premium dollars are paid for old handkeys and "bugs" from the early days of radiotelegraphy.

But, to show you that the 21st century will not spell the end of Morse code, listen to this. *The office of continuing education in Human Sciences, University of Wisconsin and the John Hopkins Institute Center for Technology in Education has formed the Morse 2000 Worldwide Outreach Program.*

This program is aiding research in using Morse code for rehabilitation and education of various groups of people especially those who are severely handicapped. Even if a person can only move an eye, tongue or finger they can communicate in Morse code faster than any method in use today! It (Morse code) has been found to be more portable, effective, easy to teach and less noticeable and inexpensive to implement.

Speeds of 20 to 25 wpm have been achieved and beat the slow and arduous keyboarding or pointing tablet methods currently in use. To communicate with others, code readers, that hams use for instance, can translate the code into any language visually, or into speech by using speech synthesizers.

"What hath God wrought?" Indeed. Morse code will serve mankind well into the 21st century. Many forget that Morse is a digital system and is the only such system that humans can encode and decode by sight, sound or touch!—Ed.

Tnx to *CQ magazine*, September 1996, pgs. 52 & 53 *World of Ideas* by Dave Ingram, K4TWJ.

Across the Border

The FCC has passed new safety standards that will affect the Amateur Radio Service in the States.

Effective 1 January 1997, U.S. amateurs running more than 50 watts PEP will be required by law to conduct routine RF radiation evaluations to determine if RF fields are sufficient to cause human exposure to RF radiation levels in

excess of those specified by the FCC. Where routine evaluation indicates that the RF radiation could be in excess of the limits, hams will be forced by law to take action to immediately remedy the situation.

The FCC report 93-82 is 100 pages and the ARRL is reviewing it to see if modifications can be made for radio amateurs. Additionally, the FCC has added 5 questions to exams concerning RF safety standards.

FCC RFI Policy

The FCC has issued a firm statement on RFI CIB-10 (Compliance and Information Bulletin).

Quote: "Each year the FCC receives thousands of complaints of interference to televisions, radios, audio systems, telephone and other home electronics equipment. *In most instances the FCC cannot resolve the problem because the cause of the interference is the design or construction of these products and not a violation of any FCC rule.*" Unquote.

The bulletin goes on to explain how consumers can get information on the Internet and several bulletins listing manufacturers that provide specific assistance with interference problems. The FCC will only get involved and take action only if the interference is caused by violations of the Communications Act or the Commission's rules or policies.

The bulletin explains RFI as mainly a lack of RFI suppression devices left out at the factory to keep the cost of the product as low as possible and still function. Consumers are told to complain to the manufacturer. CIB-10 also encourages manufacturers to include RFI suppression devices in their products. As a result, the U.S. telephone industry has begun to develop voluntary standards and the FCC will be monitoring the progress.

Where does RAC and Industry Canada stand on these issues and when will firm directives be issued in this country now that Big Brother has spoken?—Ed.

Tnx to *Worldradio* August & October 1996 issues, *NEWSFRONT* and *FCC* by Jack Kelleher, W4ZC.

Solar Flux & Indexes

After going through old Ham Radio magazines from the early 1980's, this succinct article from Questions and Answers made it easy, with a chart, to relate everything. There must be others who would find this informative and useful.—Ed.

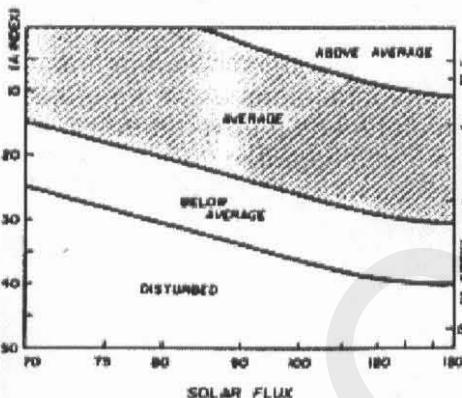
For best propagation of radio signals on the high-frequency bands, a relatively high solar flux and low geomagnetic A or K index are desirable.

The solar flux is measured at 2800 MHz in Ottawa at 1700 UTC and consists of radio noise whose magnitude has proven to be analogous to the magnitude of the energies that excite the E and F layers of the ionosphere. Solar flux magnitudes range from about 65 to 150 and can be roughly equated to smoothed sunspot numbers (SSN) and the maximum usable frequency (MUF). A value of 66 represents "quiet" solar conditions and only occurs at the bottom of the solar cycle.

Geomagnetic activity A index

This number tells how well the ionosphere has performed with respect to the reflection and absorption of radio

signals, or both, particularly in the polar regions. An A index of 0-7 means excellent reflection of signals from the ionosphere, whereas an A index of 50 or more would indicate that a major magnetic storm is occurring, with severely disturbed, if not disrupted, radio propagation conditions. Intermediate values indicate the relative condition of the earth's electromagnetic field.



Solar K index

The K index ranges from 0 to 9 and corresponds to the A index of from 0 to 50 respectively. The chart shows how the

various indexes relate to expected radio propagation conditions. Notice that the K index is logarithmic and that the A index is linear. The K index represents the current conditions and the A index represents the condition for the past 24 hours.

WWV

Besides broadcasting the time in UTC, WWV also transmits a wealth of other information the amateur radio operations will find very useful. The WWV bulletins at 18 minutes past each hour give the solar flux, the A index for the previous UTC day, the (Boulder, Colorado) K index (changed every 3 hours), the state of solar activity and the condition of the earth's magnetic field for the past 24 hours. Prediction factors for the next 24 hours are also given.

The K index is close to an instantaneous value and the trend is important. A rising trend means degraded HF propagation; values of 4 and up may mean auroral conditions on the VHF bands. The K index is used to derive the A index for the whole UTC day. *Tnx to the ARRL Handbook.*

VE3BGA Memorial 2m VHF Contest

To perpetuate the memory of Barry Hunter, VE3BGA, who passed away September 15, 1993, the LARC will sponsor a 2 meter VHF SSB/FM contest during the month of December from 0000 December 1 to 2359 December 31, 1996 EST.

Contacts may be made on either 2m FM simplex or via repeaters and 2m SSB. Contacts must be logged and show the following information: Call Sign of the station worked; i.e. direct contact only. Logs must be completed and handed in to Norm, power output; RS(T) report; name of operator worked; QTH of station worked; Callsign of repeater used in the case of FM; and Grid Square of the station worked in the case of SSB. All contacts must be made on the 2m band (no cross band operation).

The entrant must be a member in good standing of the Lakehead

Amateur Radio Club as of December 1, 1996. You must use your own equipment and in the case of FM operation through repeaters, contacts must originate no further than 25 miles from the address shown on your license issued by Industry Canada. Stations worked need not be members of the LARC.

Packet QSO's on simplex may be worked but **without** the aid of a digi. Logs must be completed and handed in to Norm, VE3XRC no later than January 15, 1997. Trophies will be awarded for top scorers in the SSB category and the FM repeater/simplex modes at the Annual Dinner of the LARC during the month of February.

Scoring for SSB contacts will be as follows: Each SSB contact is worth 5 points. Multipliers are

individual Grid Square. Scoring in the FM/Repeater/Simplex category is: Each contact through repeaters owned and operated by the LARC (VE3YQT and VE3TBR) are worth 5 points each.

Other repeaters outside Thunder Bay i.e. across the Lake, Grand Marais, etc., are worth 10 points each. Simplex contacts are worth 10 points each. Stations can only be worked on one mode i.e. either on the repeaters or simplex, but not both. Multipliers will be individual Province or State.

Scoring sheets and logs will be available from VE3XRC, Norm at the November meeting or at any Blue Parrot breakfast up to December 1, 1996. Any questions may be directed to Norm, VE3XRC on 2m or on the twisted pair at home (577-9316).